



Saskatchewan
Environment
and Resource
Management

Surface Exploration

**Guidelines
for the Mineral
Exploration
Industry**



Contents

Section 1 - Introduction	1
Section 2 - Environmental Awareness Program	1
Section 3 - Staking	2
Section 4 - Grass Roots Exploration	2
Airborne Geophysical Surveys	2
Property Evaluation and/or Grassroots Prospecting	2
Section 5 - Application for a Surface Exploration Permit	3
Size and Location of Mineral Lease (Mineral Rights)	3
Location and Development of Access Routes	3
Establishing Temporary Work Camps	3
Non-authorized areas	3
Liquid and Solid Wastes	4
Kitchen and Shower Waste Water (Grey Water)	4
Domestic Garbage	4
Fuel Storage	4
Fire Prevention and Control	5
Section 6 - Planning Exploration Activities	6
Fisheries	6
Land and Vegetation	6
Wildlife	6
Section 7 - Specific Exploration Activities	6
Hydraulic Stripping	6
Trenching	6
Drilling	7
Drill Core Storage	7
Section 8 - Closing Down a Program	8

Appendices

Appendix I - SERM, Regional and Northern District Offices	9
APPENDIX II - Requirements for <i>Surface Exploration Permit</i> Applications	11
Appendix III - Table of Contents for a <i>Model Environmental Protection Plan (EPP)</i>	12
Appendix V - Samples Only - Surface Exploration Application and Permit Forms	13-14

Section 1 - Introduction

The Surface Exploration Guide has been developed to assist industry in protecting the natural environment, while undertaking activities associated with mineral exploration. The guide does not apply to the disposal of industrial wastes covered by a licence, approval or other authorization.

The guide provides information necessary to plan, initiate and complete a mineral exploration program to minimize environmental impacts and to meet relevant Saskatchewan legislation. Using this guide during the early planning stages of designing an exploration program, will help in the later processing and approval of exploration applications.

This guide will be revised as our knowledge of ecological systems increases and new field procedures for exploration are developed. We encourage stakeholders to provide ideas and suggestions for improving the guidelines. Address your comments and suggestions to:

Saskatchewan Environment and Resource Management
Box 5000, LA RONGE, SK S0J 1L0
(306) 425-4434 or
fax (306) 425-4469
or

Saskatchewan Environment and Resource Management
3211 Albert Street
REGINA, SK S4S 5W6
(306) 787-6198 or
fax (306) 787-1349

Section 2 - Environmental Awareness Program

Environmental awareness and a good knowledge of environmental protection measures helps to avoid or reduce adverse exploration impacts. Ultimate responsibility for environmental protection rests with the company holding the permit and their assigned field personnel. Accordingly, personnel must know and follow permit conditions and applicable regulations.

Mineral disposition holders are responsible for obtaining required documents and necessary authorizations for activities related to an exploration program. The permit holder is responsible for the actions of their subcontractors and agents.

Some broad guidelines that will assist disposition holders in achieving minimal disturbance to the environment are:

- ▶ avoid unique, sensitive and/or formally designated areas, i.e. parklands, ecological reserves, etc;

- ▶ avoid critical fish and wildlife habitat;
- ▶ avoid periods of greatest environmental sensitivity;
- ▶ minimize disturbance and/or contamination of land, water and air; and
- ▶ restore disturbed areas through clean up and/or reclamation.

Exploration companies are encouraged to develop internal operating procedures based on the various environmental Acts and

Regulations governing the mineral exploration industry in Saskatchewan. Operating procedures should include orientation programs for all workers before field work commences. Orientation should be tailored to the specific area of interest and the specific activity and training programs should be updated on a regular basis.

Section 3 - Staking

The proponent is not responsible to obtain any permits for the purpose of staking a claim on Crown resource land, if the staking exercise does not require the establishment of a temporary work camp.

The proponent is encouraged to contact Saskatchewan Energy and Mines (SEM) and Saskatchewan Environment and Resource Management (SERM) prior to staking to ensure that the area of interest is open to staking.

Section 4 - Grass Roots Exploration

Once a claim has been staked and registered with SEM, it is the proponent's responsibility to contact SERM to obtain the permit or permits to initiate any exploration activities within their claim block. It is the responsibility of the company holding the mineral disposition to obtain all permits related to surface access. The extent of information required by the SERM will depend on the location, duration, scope and extent of the proposed exploration program.

► **Environmentally sensitive areas.**

District conservation officer must contact the appropriate branch within SERM which may request (a) detailed project proposal from the proponent; (b) Environmental Impact Assessment (EIA) or an Environmental Protection Plan (EPP).

Note: All mineral exploration activities on Park lands must complete an EPP.

- **Co-management areas, Indian Reservations, and/or communities.** Work proposed in or near co-management areas, Indian reservations, and/or communities may be requested to provide public consultation

opportunities on proposed activities.

- **Forest Management License Agreement Areas (FMLAs).** The company may be requested to contact the FMLA holder if proposed exploration activities fall within a FMLA area.

Airborne Geophysical Surveys

Airborne Geophysical Surveys *do not* require SERMs authorization.

Property Evaluation and/or Grassroots Prospecting

Small exploration and/or prospecting camps or small mapping and/or prospecting projects *will not require* SERMs authorization. This exemption

will be limited to one or two person crews working for a **maximum of 15 person-days**, conducting activities associated with surface mapping, prospecting and/or reconnaissance geochemical sampling and that do not cause surface disturbances. *Although no permits are required, the local conservation officer must be notified of camp location as well as work crew plans to enter and leave the bush.* This is required to ensure the safety of workers.

Note: Other mineral exploration activities require authorization from SERM.

Section 5 - Applying for a Surface Exploration Permit

Any activity beyond those described in Section 4 require a Surface Exploration permit(s).

Mineral exploration and authorization will now only require one application and one permit which will be issued by SERMs district conservation officer. See Appendix 11 for information the proponent is required to give a conservation officer when applying for a Surface Exploration permit.

When applying for a *Surface Exploration* permit, it is the proponent's responsibility to include activities such as:

- ▶ line cutting, or any hand or mechanical clearing of forest vegetation;
- ▶ ground geophysical surveys;
- ▶ seismic surveys;
- ▶ establishing a temporary work camp;
- ▶ hand and/or hydraulic stripping of outcrop;
- ▶ hand and/or mechanical trenching;
- ▶ trail and/or road construction and/or upgrading of any existing trails and/or roads (applies to summer and winter conditions); and
- ▶ circulation, reverse circulation and/or diamond drilling.

Providing as much exploration activity detail as possible on an application reduces review time and processing of applications. Completed application forms must include:

Size and Location of Mineral Disposition (Mineral Rights)

Identify the area and location on a 1:50,000 scale topographical map, claim map, or a legible photocopy.

Location and Development of Access Routes

The following guidelines apply to proposed work activities such as planning a camp site, clearing a drill pad or constructing an access route:

- ▶ **Clearing** - All clearing, including access routes, must be kept to a minimum. Access near waterbodies will be a minimum of 90 metres back from the waterline unless authorized by SERM.

During any clearing operation, organic topsoil must be preserved. In sensitive areas (permafrost, stream crossings, etc.), hand clearing will be required. Logs and other debris must not be skidded, pushed or left in any waterbody.

- ▶ **Trails** - Existing trails, portages and other travel routes must not be altered in such a manner as to interfere with other uses.
- ▶ **Access** - Access routes originating off main roads or highways must be dog-legged.

- ▶ **Reclamation** - Salvage and reclamation requirements will vary according to access classification. These requirements will be specified as conditions of the permit.

Establishing Temporary Work Camps

A condition of approval of *Surface Exploration* permits will be a minimum 30-metre buffer of undisturbed vegetation between any open water and exploration camp facilities. All access to water bodies must be approved.

Establishment of temporary work camps or other facilities must be conducted in such a manner that previously cleared areas are utilized prior to the clearing of any new areas.

Holders of temporary work camp permits are responsible for the actions of their subcontractors and agents.

Non-authorized Areas

Temporary work camps *will not be authorized* in the following locations:

- ▶ archaeological, historical, vertebrate palaeontological or other heritage property sites as defined in *The Heritage Property Act*, except by approval of the

department responsible for the administration of the statute;

- ▶ formally designated areas for environmental or scientific activities, including nesting sites of endangered species or locations supporting unique vegetation;
- ▶ areas committed to other land uses;
- ▶ locations on ice covered fish-bearing waters, unless approved by SERM; and
- ▶ areas that are restricted under other SERM policies or municipal zoning plans.

Contact the SERM District Office for current information regarding sensitive areas.

Liquid and Solid Wastes

No liquid or solid waste, sewage or sewage effluent may be directly discharged onto the ground surface or into any surface water body. Pit latrines may be used for smaller camps.

Larger camps (Class B or C), may be required to use alternative means of disposal for liquid and solid wastes; that is, transport from site to approved disposal site, in accordance with Saskatchewan's Public Health requirements.

Any liquid waste containing heavy metals, toxic materials, flammable, explosive or radioactive substances should not be discharged to domestic liquid waste systems. Such wastes must comply with the applicable Regulations, including *The Hazardous Substances and Waste*

Dangerous Goods Regulations and The Mineral Industry Environmental Protection Regulations. Direct inquiries regarding disposal of any of these contaminants to SERMs Prince Albert office. Phone (306) 953-2296.

Kitchen and Shower Waste Water (Grey Water)

Liquid wastes from food preparation, laundry and personal bathing must be channelled or otherwise disposed of in a sump pit.

Domestic Garbage

Camps with reasonable road access must remove all garbage to an approved landfill.

Camps without road access will be allowed to burn combustible garbage under the following conditions:

- ▶ No burning is permitted during fire bans. Prior to burning, the camp supervisor must contact SERMs district office for approval to burn.
- ▶ All burning must be done in a controlled manner; that is, in a burning barrel equipped with a grated top to help prevent the escape of burning ashes and embers.
- ▶ The burning barrel should be located in a clearing, away from potential fire hazards such as trees, shrubs and camp facilities.
- ▶ No burning during periods of high winds.
- ▶ Fires must always be attended until they are completely out.
- ▶ The burning location must be equipped with fire fighting tools, such as a shovel, a chemical fire extinguisher and a full water pack.
- ▶ Remains of any burning wastes must be buried in a pit with a

minimum depth 0.5 metres below surface and 30 metres from the high water-line of any waterbody. Wastes can also be bagged and transported to an outside location where it may be disposed at an approved landfill site.

Large non-combustible objects, including discarded equipment and empty fuel containers must be removed to an outside location where they may be properly disposed of in an approved landfill.

No garbage and/or food, including used cooking oils and grease should be allowed to accumulate and/or rot. Covered secure storage will discourage nuisance animals such as bears.

Fuel Storage

Fuel should be stored a minimum of 30 metres from any waterbody. Careful consideration should be given to the amount of fuel to be stored at an exploration camp. For example, a maximum of 11, 205-litre drums holding gasoline and diesel fuel, may be stored in one designated storage area. Gasoline and diesel fuel are defined as industrial hazardous substances.

On site fuel storage facilities must be inspected on a weekly basis to ensure no spills or leakage has occurred. If a spill occurs, the following steps must be taken by camp personnel:

- ▶ prevent further spillage;
- ▶ contain the spilled material;
- ▶ minimize the effects of the spill; and
- ▶ restore the area affected as nearly as possible to its previous condition.

It is the proponent's responsibility to report any significant spills to the Spill Control Centre within 24 hours of their discovery. The Spill Control Centre 24-hour emergency telephone number is **1-800-667-7525**.

A significant spill for petroleum products is defined as:

Gasoline	200 litres or more
Diesel Fuel	200 litres or more
Bunker Oil	200 litres or more
Kerosene	200 litres or more
Aviation Fuel	200 litres or more
Stove Oils	200 litres or more
Lubricating Oils	50 litres or more
Other	50 litres or more

Industrial hazardous substances stored in one storage facility with an overall weight of 2000 kilograms or more (approximately 11, 205-litre drums) must be stored in accordance with the Hazardous Substances and Waste Dangerous Goods Regulations.

Fire Prevention and Control

Prior to camp installation, the on-site supervisor must contact the local conservation officer to obtain information on fire prevention. It is the supervisor's responsibility to ensure work crews are familiar with fire protection procedures and take all necessary precautions to prevent the spread of fire from camps or work areas. All camp employees are required to have instruction in fire prevention and control measures.

All exploration camps are required to have *industry-approved* chemical fire extinguishers permanently located in each tent and building, and at every site containing combustible materials, such as generator and fuel storage sites. Tents and buildings should be spaced some distance apart to reduce the risks from spreading fires.

Refer to the following table for a list of tools required for fire prevention and control measures in a temporary work camp.

Larger camps must have a pump and enough hoses to reach all areas of the camp. Proponents may prefer to install a portable sprinkler system

designed for wild fire protection. These systems, when properly installed, could prevent a camp from burning.

All power equipment must be equipped with a properly working muffler (including power saws). Power saw fuel and oil must be kept in approved containers.

Heavy equipment must be equipped with a chemical fire extinguisher not less than one litre capacity. All heavy equipment must be kept free from fuel and oil accumulation. Oil and hydraulic lines and couplings must be free of leaks. Exhaust from heavy equipment must be released through a vertical pipe free of leaks. Power equipment must not be operated when SERM has placed bans on their use in the bush and should not be operated during extremely dry periods.

Fire Equipment	up to 5 workers	6 to 10 workers	11 to 20 workers
Axes	1	1	1
Pulaskis or Grub Hoes	2	4	8
Pails (canvas or metal)	2	4	8
Shovels	2	4	8
Water Packs and Pumps	1	2	4

Section 6 - Planning Exploration Activities

Although most activities associated with exploration do not impact the environment, there are areas and seasons when workers must take precautions to avoid negative environmental impact on localized areas and inhabitants. The following interests must be considered when planning and conducting exploration activities:

Fisheries

All mineral exploration activities must minimize the disturbance of fish and fish habitat. Workers should be aware that pike, walleye, grayling and sucker spawn in the spring, April 15 to June 30; lake trout, cisco and whitefish spawn during late summer and early fall, September 15 - November 30. In either case, the preferred spawning areas are generally the shallower portions of lakes, river mouths, gravel bars, and bays. Whenever possible, exploration activities should be limited or avoided entirely in these areas.

Land and Vegetation

Conduct mineral exploration activities to minimize the disturbance to unstable slopes, permafrost areas and wetlands. Activities in these sensitive areas will be restricted to winter whenever possible and are subject to approval by the district conservation officer.

Wildlife

All mineral exploration activities, including low level aircraft and helicopter flights, must be conducted to minimize disturbance to wildlife. Efforts must be made to avoid areas near rapids or rapidly flowing water

from spring breakup until July 31 as these areas are critical habitat for eagles and osprey. Nesting areas of colonial birds such as cormorants, gulls, herons and pelicans must be avoided from spring breakup until July 15. It is unlawful to chase wildlife with any aircraft or motorized vehicle. The feeding of wildlife is discouraged by SERM.

Nuisance animals, such as bears, may not be trapped or shot without SERM approval unless they pose an immediate hazard to human safety. Animals trapped or shot without authorization must be promptly reported to the nearest SERM district office to obtain authorization for disposal.

Section 7 - Specific Exploration Activities

Drilling, trenching and hydraulic stripping for rock and mineral samples can cause excessive damage to terrain and can disturb wildlife. These activities may also contaminate the soil and water. Negative impacts can be reduced or avoided by adhering to the following safeguards:

Hydraulic Stripping

Any proposal for hydraulic stripping must be approved on an individual project basis by SERM's district conservation officer responsible for issuing the *Surface Exploration* permit.

Within a hydraulic stripping operation, washing surface cover into a water body must be avoided. A minimum 90-metre buffer of undisturbed vegetation must be left

between hydraulic stripping operations and waterbodies unless otherwise authorized by SERM.

Trenching

All trenching projects must be approved on an individual project basis by the district conservation officer responsible for issuing the *Surface Exploration* permit.

A minimum 90-metre buffer of undisturbed vegetation must be left

between trenches and water bodies unless otherwise authorized by SERM.

Development of exploration trenches must consider the safety risks associated with entrapment of humans and/or wildlife. Therefore, trenches must be dug to allow for easy escape.

Top soil and other material removed from an excavated trench must be stockpiled separately for future use

in site restoration. Excavated materials from trenching or test pits must be backfilled replacing topsoil last. In the case of uranium exploration, following backfilling, a radiometric survey must be conducted to ensure that gamma levels measured at one metre from the surface are reduced to less than 100 μ R/hr.

Any trenches not restored, (i.e. remain in an excavated form), according to these guidelines, must be approved by the conservation officer, prior to obtaining a release from that property.

Drilling

Drilling only applies to surface drill exploration projects. Underground drilling, shaft sinking and/or decline construction require separate approvals from SERM, which are issued in compliance with the *Environmental Assessment Act* and the *Mineral Industry Environmental Protection Regulations*.

The proponent must be aware of other land users at all times.

Commercial, fuel absorbent materials must be available at each drill site. The absorbing material must be routinely installed in all areas where fuel leaks are common including drill setups on lake ice. Contaminated absorbent materials must be removed from the property and properly disposed of at an approved location.

An adequate closed circuit facility must be provided for drilling mud and flocculating agents. Drill sludge must not be allowed to run uncontrolled or enter waterbodies during open water season. *A well-constructed settling pond or sump a*

short distance down slope from the drill is usually adequate. Drill mud solids or cuttings that have an uranium concentration greater than 0.05 per cent must be disposed of down a drill hole and sealed.

Biodegradable drill mud(s) must be used. In the case of drills working on lakes, drill mud, drill cuttings and return water can be left at the site provided the drill cuttings do not have an uranium concentration greater than 0.05 per cent and that the drilling additives are not used in concentrations that are lethal to fish. *SERM's regional fisheries biologist can provide advice related to drilling agents and fish toxicities.*

A minimum 90-metre buffer of undisturbed vegetation must be left between drill holes and water bodies unless authorized by SERM.

It is recommended that drill holes be grouted to prevent the possibility of creating an artesian drill hole. Every artesian drill hole must be reported to the conservation officer within 30 days of its discovery. All artesian drill holes must be sealed to prevent discharge to the environment.

After the completion of each drill hole, under lakes, streams or muskeg, grouting must be used to seal the upper 30-metres of bedrock, or the entire depth of the hole, whichever is less.

Any drill hole which produces mineralization with an uranium content greater than one per cent over a length greater than one metre and/or with a metre per cent concentration greater than five, must be grouted throughout the entire mineralized zone or not less than 10 metres above and 10 metres below the area.

Drill Core Storage

Section 101(4) of *The 1986 Mineral Disposition Regulations* reads "no person, whether or not a holder (Mineral Lease) under these regulations, shall intentionally remove from Saskatchewan, or intentionally discard, dump, destroy, or otherwise reduce the scientific value of drill cores obtained from any disposition lands except for those portions used for assaying, testing and metallurgical, mineralogical or other scientific studies, without the written permission of the minister."

All core remaining on site must be stored in standard core boxes before a proponent is "released" from their responsibilities associated with the **Surface Exploration** permit. Each box must be identified with weather proof labels indicating the hole number and core interval represented. In addition, the first and last core box of each hole requires a weatherproof label identifying the name of the company having drilled on the property. Core boxes should be cross stacked on top of one another on a well-drained site; avoid low lying areas. Each layer should be stacked perpendicular to the layer above and below it. The bottom layer of boxes must be supported off the ground by approximately 15 - 45 centimetres on solid footings. Common sense should be used when determining the total height of the stack. The end result must be a stable stack of core which is unlikely to tip over. Each box on the top layer of the stack should be sealed with a standard core box lid or material suited to minimize weathering.

In the case of an advanced exploration program which has accumulated a large amount of core (3,000 metres or more), the company may be allowed to leave the core in core racks if they are deemed to be stable by SERM's inspecting conservation officer. All core boxes left in core racks must be securely sealed with an appropriate lid as described above. This will help to preserve the core from weathering and keep the core intact, should the core rack collapse in the future.

All storage areas must be located a minimum of 30 metres from the high waterline of all waterbodies.

The proponent is responsible for all core drilled on a property since the date they became the current operator of the property. Proponents are responsible to cross stack the existing core or upgrade the existing

core racks to a structurally stable condition and attach lids to the boxes stored in these racks.

A proponent working on an active claim must take all reasonable actions to salvage (if possible) and/or upgrade any core racks that predate their involvement with that particular property in order that the aesthetics of the area are improved and the geological record may be maintained.

If a property is sold or acquires a different operator, all responsibilities for the core are immediately transferred to the new operator and/or owner.

Whenever possible, meaning when it can be demonstrated that this action will not create any additional stresses on the environment, all core generated in a given project area

should be stored in one location. The company should note this location on the location map submitted with their permit applications and in their assessment reports, submitted to SEM.

Any core storage area that does not fall into one of the categories discussed above should be documented and forwarded to the appropriate SERM regional office for documentation and follow up.

Gamma radiation levels of a core storage area must meet the decommissioning requirements outlined by the SERM. Specifically, gamma radiation levels (measured at one metre from surface) for a storage area should be reduced to 100 $\mu\text{R/hr}$ and in no instance will the level be allowed to exceed 250 $\mu\text{R/hr}$.

Section 8 - Closing Down a Program

Before a proponent may be "released" from the responsibilities associated with a Surface Exploration permit, the work area must undergo a final inspection by a SERM conservation officer.

It is the proponent's responsibility to notify the conservation officer who issued the permit of the estimated completion date of the project. Notification must be done as soon as the proponent is aware of the completion date, preferably a minimum of two weeks prior. For sites not accessible by road, every effort should be made to arrange transportation for the inspecting officer.

Appendix I - Saskatchewan Environment and Resource Management

Saskatchewan Environment and Resource Management Regional and Northern District Offices

La Ronge Region - P.O. Box 5000, La Ronge, SK S0J 1L0 (306) 425-4254 Fax (306) 425-2580

Pelican Narrows District
P.O. Box 70
Pelican Narrows SK S0P 0E0
☎ (306) 632-2101
Fax (306) 632-2114

Southend District
General Delivery
Southend SK S0J 2L0
☎ (306) 758-2177
Fax (306) 758-2010

Stony Rapids District
General Delivery
Stony Rapids SK S0J 1L0
☎ (306) 439-2062
Fax (306) 439-2036

Sub-office
P.O. Box 70
Sandy Bay SK S0P 0G0
☎ (306) 754-2066
Fax (306) 754-2055

Sub-office
General Delivery
Wollaston SK S0J 3C0
☎ (306) 633-2112
Fax (306) 633-2164

Sub-office
General Delivery
Uranium City SK S0J 2W0
☎ (306) 498-2134
Fax (306) 498-3883

Creighton District
P.O. Box 190
Creighton SK S0P 0A0
☎ (306) 688-8205
Fax (306) 688-4745

La Ronge District
P.O. Box 5000
La Ronge SK S0J 1L0
☎ (306) 425-4254
Fax (306) 425-2580

Pinehouse District
General Delivery
Pinehouse SK S0J 2B0
☎ (306) 884-2060
Fax (306) 884-2101

Meadow Lake Region - P.O. Box 580, Meadow Lake, SK S9X 1C7 (306) 236-7540 Fax (306) 236-7677

Beauval District
P.O. Box 280
Beauval SK S0M 0G0
☎ (306) 288-2050
Fax (306) 288-2233

Buffalo Narrows District
P.O. Box 158
Buffalo Narrows SK S0M 0J0
☎ (306) 235-4301
Fax (306) 235-4624

Meadow Lake District
P.O. Box 580
Meadow Lake SK S9X 1C7
☎ (306) 236-7557
Fax (306) 236-7677

Sub-office
P.O. Box 100
Ille-a-la-Crosse SK S0M 1C0
☎ (306) 833-2500
Fax (306) 833-2552

Sub-office
P.O. Box 40
La Loche SK S0M 1C0
☎ (306) 822-2033
Fax (306) 822-2030

Sub-office
P.O. Box 100
Green Lake SK S0M 1B0
☎ (306) 832-2044
Fax (306) 883-2449

Spiritwood District
P.O. Box 910
Spiritwood SK S0J 2M0
☎ (306) 883-2306
Fax (306) 883-2449

Dorintosh District
P.O. Box 70
Dorintosh SK S0M 0T0
☎ (306) 236-7680
Fax (306) 236-3434

Glaslyn District
P.O. Box 337
Glaslyn SK S0M 0Y0
☎ (306) 342-2112
Fax (306) 342-4451

Sub-Office (Chitek Lake)
P.O. Box 910
Spiritwood SK S0J 2M0
☎ (306) 984-2343
Fax (306) 883-2449

Loon Lake District
P.O. Box 337
Glaslyn SK S0M 0Y0
☎ (306) 342-2112
Fax (306) 342-4451

Pierceland District
P.O. Box 190
Pierceland SK S0M 2K0
☎ (306) 839-2002
Fax (306) 839-2329

Surface Exploration Guidelines for the Mineral Exploration Industry

Prince Albert Region, P.O. Box 3003, Prince Albert, SK S6V 6G1 (306) 953-2896 Fax (306) 953-2502

Big River District
P.O. Box 250
Big River SK S0J 0E0
☎ (306) 469-2520
Fax (306) 469-4511

Christopher Lake District
P.O. Box 66
Christopher Lake SK S0J 0N0
☎ (306) 982-2002
Fax (306) 982-3031

Candle Lake District
P.O. Box 500
Meath Park SK S0J 1T0
☎ (306) 929-4656
Fax (306) 929-3003

Sub-office (Dore Lake)
P.O. Box 490
Big River SK S0J 0E0
☎ (306) 832-4503
Fax (306) 832-4510

Sub-office (Weyakwin)
General Delivery
Molanosa SK S0J 1W0
☎ (306) 663-5620
Fax (306) 663-5644

Carrot River District
P.O. Box 550
Carrot River SK S0E 0L0
☎ (306) 768-2741
Fax (306) 768-3840

Cumberland House District
P.O. Box 70
Cumberland House SK S0E 0S0
☎ (306) 888-2077
Fax (306) 888-2277

Greenwater District
P.O. Box 430
Porcupine Plain SK S0E 1H0
☎ (306) 278-2972
Fax (306) 278-3336

Hudson Bay District
P.O. Box 970
Hudson Bay SK S0E 0Y0
☎ (306) 865-2274
Fax (306) 865-2179

Melfort District
P.O. Box 6500
Melfort SK S0J 1T0
☎ (306) 752-6214
Fax (306) 752-6218

Mistatim District
P.O. Box 27
Mistatim SK S0E 1B0
☎ (306) 889-2161
Fax (306) 889-2033

Nipawin District
P.O. Box 1886
Nipawin SK S0E 1E0
☎ (306) 862-1790
Fax (306) 862-3353

Pelly District
P.O. Box 89
Pelly SK S0A 2Z0
☎ (306) 595-2135
Fax (306) 595-2230

Preeceville District
P.O. Box 637
Preeceville SK S0A 3B0
☎ (306) 547-2936
Fax (306) 547-2273

Prince Albert District
P.O. Box 3003
Prince Albert SK S6V 6G1
☎ (306) 953-2322
Fax (306) 953-2321

Smeaton District
P.O. Box 130
Smeaton SK S0J 2J0
☎ (306) 426-2611
Fax (306) 426-2066

Saskatoon Region, Saskatoon SK S7K 2H6 (306) 933-6242 Fax (306) 933-8442

Swift Current Region, Swift Current SK S9H 4G3 (306) 778-8207 Fax (306) 778-8212

Appendix II

Requirements for Surface Exploration Permit Applications

The following information requirement encompasses all aspects of the exploration process. Any exploration proposal submitted for authorization need only address those information elements which are pertinent to the actual project. However, proponents are encouraged to provide the fullest possible information to assist SERM in a prompt evaluation of the submission.

Format:

Information should be submitted in the following format: A 1:50,000 scale map showing exploration activities to accompany any submission for land-use authorization. When requested, a 1:12,500 scale forest inventory map should be used in Forest Management License Agreement (FMLA) areas.

Information on the map should indicate:

- ▶ location of claim block/mineral lease;
- ▶ existing trails, skidder trails, roads, cut lines;
- ▶ location of clearing;
- ▶ access routes, exploration camp sites;
- ▶ site plan for camps occupied in excess of 100 person days/permit year;
- ▶ specific locations of any proposed stripping and/or trenching;
- ▶ general location of new and existing drill sites;
- ▶ fuel storage locations in relation to land and water;
- ▶ location of test pits and trenches; and
- ▶ core storage site(s).

1. Exploration Activities:

- ▶ indicate if the mineral commodity is uranium;
- ▶ detailed outline of activities to be carried out in the claim block;
- ▶ (drilling, line cutting, geophysics, clearing, stripping, quarrying, etc.); and
- ▶ future exploration plans.

2. Access:

- ▶ proposed and alternative method(s) of access;
- ▶ proposed stream crossing(s) (consultation with the issuing officer will determine method of crossing);
- ▶ proximity of road corridor to water bodies; and
- ▶ public access restrictions

3. Work Camps:

- ▶ type of camp, construction time and facilities present;
- ▶ camp duration and number of occupants;
- ▶ proposed water supply and method of sewage/garbage disposal;
- ▶ geography (slope/topography/soils) of area;
- ▶ existing land use dispositions in the surrounding area; and
- ▶ existing exploration camps/drill sites in the area.

4. Land Clearing (including camp, access and exploration sites):

- ▶ size of clearing;
- ▶ size and type of timber;
- ▶ proposed timber and brush disposal/salvage methods;
- ▶ proposed time of clearing; and
- ▶ proximity to water bodies (lake, streams) to clearings.

5. Drilling:

- ▶ number of holes to be drilled and operational phase, i.e. reconnaissance infill or definition drilling;
- ▶ duration of operation, i.e. estimated start and completion dates;
- ▶ source of water and proposed method to handle return water;
- ▶ type of drilling equipment to be used; and
- ▶ type of mud and other additives to be used.

6. Hydraulic Stripping and Trenching:

- ▶ estimated dimensions of any proposed stripping and/or trenching; and
- ▶ proposed method of construction, i.e. heavy equipment, blasting, etc.

7. Operator:

- ▶ companies associated with the exploration company (including contractors);
- ▶ designated operator responsible for project and approvals; and
- ▶ contact person(s) for the project and exploration contracts.

8. Proposals for Reclamation of Disturbed Sites Including:

- ▶ access trails/roads;
- ▶ test pits/trenches and quarry sites, areas of hydraulic stripping;
- ▶ camp and drill sites; and
- ▶ the proposal should include the method, timeframe and/or monitoring method of revegetation programs.

Appendix III

Table of Contents for a Model Environmental Protection Plan (EPP)

- | | |
|---|--|
| <ul style="list-style-type: none">1. Introduction2. Project Description3. Environmental Setting<ul style="list-style-type: none">▶ vegetation and land use▶ geology and soils▶ aquatic environment▶ wildlife▶ archaeology/heritage resources▶ social issues (including municipal government)▶ other concerns4. Route/Site Selection<ul style="list-style-type: none">▶ including alternatives considered | <ul style="list-style-type: none">5. Potential Impacts and Mitigation6. Environmental Protection Plan<ul style="list-style-type: none">▶ general environmental protection procedures▶ right-of-way/site protection▶ reclamation plan7. Monitoring8. Alignment Sheets, Maps or Airphotos |
|---|--|

Note: This model is general and should be adapted to meet specific project and location details.

Source: Environmental Assessment Branch, SERM, 1995

Appendix IV



Saskatchewan
Environment
and Resource
Management

LANDS-24
04/09/96

Permit Application Number: _____

Surface Exploration Permit Application

This form must include information on the actual exploration project. Refer to *Appendix III of Surface Exploration: Guidelines for the Mineral Exploration Industry* for requirements on exploration projects.

Applicant's Name: _____

Applicant's Position or Title: _____

Company Name: _____

Address: _____ Postal Code: _____

☐ Phone: _____ Fax: _____

Client Contractor: _____

Address: _____ Postal Code: _____

☐ Phone: _____ Fax: _____

Field Supervisor: _____

Project Details Mineral Disposition No.: _____

Start date: _____ Completion date: _____

Location Work Area

Unsurveyed: UTM Easting _____

Surveyed: UTM Easting _____

NTS Map Sheet _____

Description of Proposed Work

Attach location and proposal information for specific exploration project. *Indicate if explosives are to be used.* For forestry purposes, include disposition, zone, easting, northing, stand numbers, quantity, units, species and size.

Authorization Requested

Fees

1. Work Authorization 1. _____

2. Temporary Work Camp
New Application _____ Renewal _____ No. Person/Days _____ Size _____ 2. _____

3. Shoreland Alteration (Conditions will be outlined on permit)
Water Body: _____ Activity: _____ 3. No Charge

4. Timber Cutting
(a) Timber Removal Outside Forest Management Licence Agreement (FMLA) 4.(a) _____
(b) Timber Removal Within a Forest Management Licence Agreement (FMLA) ... see attached (b) _____

5. GST Registrant # _____ GST Exemption # _____ 5. Taxes: _____

Field Receipt # _____ Total: _____

Application Date: _____ Applicant's Signature: _____

Office Use Only:

Officer's Recommendations	
Expiry Date: _____	Permit Application No. _____ Approved _____ Not Approved _____
SERM District Office: _____	Phone: _____ Fax: _____
Date: _____	Officer's Signature: _____



Surface Exploration Permit

Permit Number: _____

This *Surface Exploration Permit* certifies that _____
of _____ Phone _____,
having paid the required fees of \$ _____ is authorized to conduct a surface exploration project
from _____ month/day/year to _____ month/day/year at the location identified on the attached map,
subject to and in accordance with the following conditions:

1. The surface exploration project must be carried out at the specified location, and as it is defined on the attached *Surface Exploration Permit Application*, Number _____.
2. When authorized below, this *Surface Exploration Permit* consists of a:
 - Temporary Work Camp Permit, (TWCP) under *The Resource Lands Regulations, 1989 (The Provincial Lands Act)*
 - Work Authorization Permit under *The Resource Lands Regulations, 1989 (The Provincial Lands Act)*
 - Shoreland Alteration Permit under *The Environmental Management and Protection Act*, and

is subject to all provisions of the foregoing Acts and Regulations. Failure to comply with any provisions in the foregoing Acts and Regulations constitutes an act of noncompliance.

Any activities performed that are not in compliance with this permit or the provisions under the foregoing Acts and Regulations must be stopped immediately and reported to the conservation officer responsible for issuing this permit.

- 3) This permit does not constitute a burning permit for the purposes of *The Prairie and Forest Fire Act, 1988*.
- 4) This permit does not constitute a timber permit under the *Forest Regulations*. If required, timber permit is attached: yes ____ no ____
- 5) The permit holder shall decommission and reclaim all or part of the land, water or water courses used or disturbed in the exploration for minerals pursuant to this permit.
- 6) The permit holder shall adhere to **Special Conditions**. If required, **Special Conditions** are attached: yes ____ no ____

Permit Issue Date: _____ Permit Holder's Signature: _____

Office Use Only	
SERM District Office _____	Fee Structure
Officer's Signature _____	TWCP _____
	Shoreland Alteration _____
	Work Authorization _____
	Application Fee _____
	Tax (if applicable) _____
	Total Fees _____